

PROPOSED POLICY LANGUAGE FOR CPAM 2009-0002:
Chesapeake Bay Preservation Act Policies

Changes to Chapter 3, Chapter 4, & Glossary
of the 2001 Countywide Transportation Plan, as Amended

Policies revised through:
March 24, 2010

Key:

Blue text (double-underlined): proposed additions

Red text (strike-through): proposed deletions

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Chapter 3

County Road Networks

Design and Construction Standards

It is important that the roads serving the Suburban, Transition, and Rural Policy Areas be designed and constructed in a manner which is consistent with the special character of adjoining communities, ~~and~~ land uses, and environmental features. Roads should fit and complement the communities they serve.

VDOT has design standards for the wide variety of secondary roads that exist in Loudoun County, ranging from rural local roads to subdivision streets. However, as the County developed policies to encourage creative forms of residential development and the public demand for preservation of the character of the County's unique rural roads grew, the strict application of VDOT standards has caused problems and frustration.

VDOT design standards are closely correlated with *A Policy on Geometric Design of Highways and Streets* prepared by the American Association of State Highway and Transportation Officials (AASHTO). VDOT has been willing to consider modifications to specific standards for individual projects on a case by case basis, but the process does not result in a permanent change of VDOT standards in the County.

It is the County's view that a re-evaluation of some VDOT policies and standards would allow more efficient construction of certain types of projects with shorter time schedules and lower costs. For example, restrictions on the use of VDOT maintenance funds could be revised to allow these funds to be used for minor safety projects that need only a small amount of right-of-way. More flexibility for spot improvements as opposed to having to improve a longer section of road via a large Secondary Road Improvement Project is also desirable. Use of alternate road treatments for unpaved roads should be sought. More expeditious procedures for installing traffic calming techniques, traffic signals, stop signs and safety signage and lower speed limits need consideration.

There is strong support in the County to modify VDOT standards for roads in the Rural Policy Area in a manner which is sensitive to the rural character. The first successful use of modified standards for improvement of an existing paved rural road were on two projects on Snickersville Turnpike, Route 734. The design of these projects used the prototype of what would become "pave-in-place" standards later authorized by the state legislature. There was also extensive public participation in the design process coordinated through the Snickersville Turnpike Association.

Design and Construction Standards Policies

1. New road construction will be designed to achieve a pedestrian-friendly community character and environmental protection.
2. Coordinated trail and/or sidewalk facilities will be incorporated in all road improvement projects in which provision for pedestrian movement is consistent with the function and character of the road and/or where there is an opportunity to establish a connection with the County's existing or proposed trail system.
3. All new roads should be planned and constructed as appropriate to the standards of the Virginia Department of Transportation for acceptance into the State Highway System.
4. Provision for interparcel connections may be considered in development proposals in the Rural Policy Area, as provided in the *Facilities Standards Manual (FSM)*, and required in all development proposals in the Suburban Policy Area and encouraged in all development proposals in the Transition Policy Area to achieve a local road network, and to help keep local traffic off regional roads. In the Rural Policy Area, interparcel connections may detract from the rural setting and may not be required in all instances.

5. Direct vehicular access is discouraged between individual residential and commercial lots. Direct access from individual lots to arterial and major collector roads is discouraged.
6. Local roads that provide individual lot access will be designed to be consistent with the character of the communities they serve. They must be pedestrian-friendly and provide for safe bicycling. This is best achieved by designs that encourage slower, safe speeds and invite pedestrian and bicycle activity, using landscaped/treelined medians, sidewalks, etc.
7. The County will continue to work with appropriate business and community groups to refine and improve Virginia Department of Transportation road design standards. This process will include development of justifications for the proposed changes and strategies for approaching the state to implement the changes.
8. The County will require developers and request Virginia Department of Transportation to use Scenic Design Guidelines in planning road improvements on all designated Virginia Byways in Loudoun County. Such optional design guidelines may include the following:
 - a. Lower design speed and narrower rights-of-way to minimize land acquisition and disturbance, and to reduce the need for removal of stone walls, treelines, fences and other such features, that often parallel roads. Lower design speeds also allow road alignments that follow the existing terrain and minimize road cut and fill areas. Allowing the road to follow the topography of the area reduces the amount of land disturbance and the profile of the road.
 - b. Variable shoulder and ditch widths that are determined by the existing topography. In areas where natural water flow is away from the road, ditches could be eliminated. Variable shoulder widths could provide the flexibility to avoid removal of trees, stone walls or other such features.
 - c. Landscaping on all cleared areas that includes indigenous plants, trees, wild flowers and other groundcover found in natural areas. Landscaping should be allowed as close to the road as possible while maintaining a safe and reasonable sight distance and clear zone.
 - d. Rest areas, “pullover” areas and other features that provide the opportunity for vehicles to pull off of the main travelway.
 - e. Construction material, such as light-colored pavement, guardrails and fences that reflect the historic and rural nature of the area (i.e., painted or rustic guardrails rather than steel). In the case of new bridges, abutments and other structures, exteriors and facades should be of materials, such as the stone used in some of the historic bridges in the County.
 - f. In the case of arterial roads where a four-lane, divided section is proposed:
 - i. A variable median width should be used to allow the travel lanes to maneuver around features that are to be protected.
 - ii. Utilizing native species within the median should be used to reduce the visual impact of the road, yet allow appropriate and safe sight distance at crossovers and intersections.
 - iii. Each travel surface should individually follow the existing topography to minimize cut and fill areas and lower the road profile.
9. The Scenic Design Guidelines and other Policies supporting the preservation of the character of rural roads will be applied in ways which will not impede the construction of needed safety improvements on rural roads.
10. The County will request VDOT to re-evaluate its policies that restrict the use of maintenance funds to allow these funds to be used to construct minor safety improvements.
11. The County will work with VDOT to allow the placement of spot-improvement projects on the Secondary Road Improvement Program.
12. The County will incorporate landscaped medians using native species where possible.

13. The County will retain native vegetation and woodlands along roadways where possible.
14. The County will develop a standardized sign to be erected by developers in locations where future street extensions are anticipated.

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Chapter 4

Planning Coordination

Green Infrastructure Protection

As development occurs in Loudoun County, pressures on existing transportation infrastructure will increase. Current roads may need to be preserved, rebuilt, or relocated. New roads may need to be constructed, and alternate means of transportation may need to be identified and provided. National legislation in recent years places greater emphasis on analyzing the impacts that all forms of transportation have on the natural and built environments. The *Revised Countywide Transportation Plan* provides policy guidelines to support the *Revised General Plan* and other adopted land use planning documents. The *Revised Countywide Transportation Plan* supports the *Revised General Plan* policies for protection of the Green Infrastructure as implemented by the Ordinances, with the addition of specific environmental policies to address transportation-related impacts. Further, the Plan supports participation in regional and state efforts to improve and protect the natural environment. This section addresses the impact transportation has on both the natural and built environments, focusing on air quality, [water quality](#), noise, and heritage resources. Additional policies on these issues can be found in Chapter Five of the *Revised General Plan*.

A. Air Quality

The Washington D.C. Nonattainment Area, of which Loudoun County is a part, must meet the emissions reductions requirements of the Clean Air Act Amendments (CAAA). The CAAA specifies dates by which clean air standards must be attained and requires the preparation of a plan identifying the measures to be employed and an implementation schedule for attainment. The Washington, D.C. Metropolitan Area is designated by the USEPA as a serious non-attainment area for ozone pollution. As such, it is required to submit plans demonstrating how emissions that contribute to the formation of ozone will be reduced to levels that bring the Region into attainment status by 2005. The regional Transportation Improvement Program (TIP) and Financially Constrained Long-Range Plan (CLRP) are required to have a finding of Air Quality Conformity each time they are updated.

The most recent updates for the 2001-2006 TIP and 2002 CLRP achieved a conformity finding from the Transportation Planning Board (TPB). The Washington Region achieved its required 24-percent reductions from 1990 pollutant levels by 1999. However, the round of air-quality analysis conducted by COG in 2000 showed the region would attain conformance with reduced pollutant levels in 2005 by very narrow margins. A recent test run of the conformity assessment showed that projects proposed for the 2002-2007 TIP would not pass conformity, largely due to the increase in the number of sport utility vehicles (SUVs) on the region's roads. SUVs are classified as trucks and thus are not required to meet the same emissions standards as cars. Proposed projects not yet in the TIP and CLRP could be delayed until emissions decrease.

There have been recent court challenges to the region's designation as a serious non-attainment area, arguing that it should be reclassified as a severe non-attainment area. If this were to occur, the Region would need to conform to vehicle emissions levels at 1999 levels for future forecasts years 2006, 2010, 2020. This could result in immediate transportation sanctions and a loss of federal funding for highway projects.

It is very important that Loudoun County adopt policies that are supportive of lowering total vehicle emissions and meeting air quality standards. The County's land use policies, calling for clustered density at major transit nodes and implementation of transit routes are helpful. In the *Countywide Transportation Plan*, there must be comprehensive policy support for modes other than the single-occupant auto. These policies must promote new transit and ridesharing services—rapid rail, light rail, express interjurisdictional bus, and local bus as well as car and vanpools. They should include bicycle and pedestrian improvements as well as travel demand management strategies such as telecommuting and flexible work hours. As outlined in Chapter Two of the *Revised Countywide Transportation Plan*, the County supports these types of measures to reduce the use and dependence on the private automobile.

Air Quality Policies

1. The County will participate in the regional Clean Air Act Attainment Plan development and implementation process.
2. All transportation planning will be conducted within the context of meeting the Federal Air Quality Standards established for the region by the Clean Air Act Amendments of 1990 and the federal Environmental Protection Agency (EPA).
3. The County will implement land use policies that will reduce vehicular trips and vehicle miles traveled to achieve the air quality standards required by the federal, state or County government, whichever are the most stringent. Such land use measures may promote pedestrian facilities, bicycle use, ridesharing, mass-transit options, and mixed-use communities.

B. Water Quality

Roads can impact groundwater quality, surface water quality, and the integrity of river and stream corridors. River and stream corridors are the largest system in the Green Infrastructure and include rivers and streams, floodplains, wetlands, and riparian forests. They also contain steep slopes and many of the County's important historic, cultural, and archaeological sites. Nutrients, in the form of nitrogen and phosphorus, sediments, and nonpoint source pollution are largely responsible for pollution of these water resources and come from many sources, including roads. High runoff volumes from impervious road surfaces can also scour streambeds, leading to further sedimentation and water quality degradation. Air pollution from motor vehicles also leads to atmospheric deposition and water quality impacts. Riparian forests along streams help mitigate these effects as they provide the greatest single protection of water quality by filtering pollutants from stormwater runoff, capturing sediment, promoting infiltration, decreasing runoff volumes and velocities, decreasing stream bank erosion, and maintaining the physical, chemical, and biological condition of the stream environment.

Given the extent and the importance of river and stream corridors to water quality protection, their resources will be considered during roadway design and construction, including at the intersections of roads and streams, where floodplains and wetlands are often affected. Road development within river and stream corridors is governed by the County-adopted provisions of the Chesapeake Bay Preservation Act, Floodplain Overlay District, Scenic Creek Valley Buffer, and Steep Slope Performance Standards. Disturbances to streams and wetlands are regulated by the U.S. Army Corps of Engineers (USACE) and the Virginia Department of Environmental Quality (DEQ). USACE and DEQ require applicants to avoid and minimize impacts to the maximum extent practicable and to provide compensatory mitigation for authorized impacts exceeding established thresholds. The County will facilitate ongoing coordination with USACE and DEQ regarding active development projects.

Water Quality Policies

1. River and stream corridors will be considered when determining road alignments to avoid or minimize impacts to these areas. Roads and roadway corridors will be designed and constructed to prevent or minimize nutrient, sediment, and nonpoint source pollution loading into receiving streams, minimize erosion and sedimentation potential, maximize rainwater infiltration, and ensure the long-term performance of the measures employed.
2. Roadway development within river and stream corridors will be governed by County-adopted provisions of the Chesapeake Bay Preservation Act, Floodplain Overlay District, Scenic Creek Valley Buffer, Steep Slope Performance Standards, Erosion Control Ordinance, and Stormwater Management Ordinance.
3. Roads will meet the needs of motorists, cyclists, and pedestrians while avoiding the creation of unnecessary impervious surfaces and minimizing stormwater runoff. Stormwater management and best management practices will be provided to treat runoff from roads consistent with County ordinances.
4. Road crossings of drainageways will avoid or, when avoidance is not feasible, minimize disturbance to river and stream corridor resources. Road crossings will be constructed generally perpendicular to the flow of the drainageway to minimize impacts.
5. Forested riparian buffers are a crucial component of the Green Infrastructure that help slow runoff, prevent erosion, and filter nonpoint source pollution, such as litter, road salt, oil, grease, and heavy metals. To protect the functional integrity of riparian buffers, road projects will minimize land disturbance, minimize impervious cover, and protect and restore indigenous vegetation to the extent practicable. Appropriate measures will also be taken to eliminate noxious weeds and invasive alien plants from project areas and to prevent their spread to other areas.

6. Roads may be located within the Resource Protection Area (RPA) provided that road alignments and designs are optimized to prevent or minimize encroachment into the RPA and adverse effects on water quality. Private roads and driveways may be constructed in or across the RPA provided that there are no reasonable alternatives to aligning the private roads or driveways in or across the RPA and provided that they meet the alignment and design criteria.

C. B. Noise

Residents living in close proximity to major transportation corridors could be exposed to highway noise and, in the future, to rail noise. It is the County's intention to protect residents within reasonable limits by applying recognized standards. To implement this objective, the *Revised Countywide Transportation Plan* recommends adopting a highway noise ordinance in accordance with the State Noise Abatement Policy that outlines the standards for noise abatement that comply with federal laws (Appendix Four). This will ensure that the County receives state assistance in mitigating traffic noise problems near existing developments. The County also should adopt the state standards into the Zoning Ordinance to ensure that future development protects itself from noise problems. These projects are not intended to apply to temporary noise sources such as VDOT transportation construction projects. The Virginia State Noise Abatement Policy can be found in Appendix Four of the CTP. The County's airport and construction noise policies can be found in Chapter Five of the *Revised General Plan*.

Noise Policies

1. The County will use the *Revised General Plan's* Highway Noise Policies, which outline maximum acceptable design year noise levels for residential uses, parks and recreation areas, as well as public and quasi-public and/or other noise-sensitive land uses along specific corridors.
2. The County will require that all future land development applications that propose land uses adjacent to any of the existing and/or proposed arterial and major collector roads will be designed to ensure that no residential or other type(s) of noise-sensitive use(s) will have Traffic Noise Impacts, which occur when the predicted traffic noise levels approach or exceed the noise abatement criteria (Table 4-1, pg. 4-8), or when the predicted traffic noise levels substantially exceed the existing noise levels. To determine the predicted highway noise levels and to assess noise impacts at a particular location, a land development applicant will be required to use the latest version of the Federal Highway Administration's Highway Traffic Noise Prediction Model (FHWA-RD-77-108, as amended). The design year noise level will be understood to be the noise associated with probable traffic volumes for said arterials and major collectors at a time of 10 to 20 years from the start of construction.

Table 4-1: Noise Abatement Criteria (NAC) Hourly A-Weighted Sound Level in Decibels (dBA)

Activity Category	Leq (h)	Description of Activity Category
A	57 (exterior)	A 57 (exterior) Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residential yards, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (exterior)	Commercial uses or developed lands, properties, or activities not included in Categories A or B above.
D	---	Undeveloped lands
E:	52 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Note: Traffic noise impacts can occur below the NAC. The NAC are not federal standards or desirable noise levels; they should not be used as design goals for noise barrier construction. The NAC should only be used as absolute values which, when approached or exceeded, require the consideration of traffic noise abatement measures.

3. The County will amend the Zoning Ordinance to implement the State Noise Abatement Policy, thereby minimizing

future highway noise impacts and qualifying the County for state assistance in the event noise-abatement features are needed to protect existing developments.

4. The County discourages the use of structural noise abatement measures such as concrete walls unless federally acceptable noise levels cannot be reached by other means. When used, noise walls should include design elements such as articulated walls and gradual descents that blend with natural features in the landscape. Walls should be supplemented with appropriate landscaping and reflect the character of the surrounding natural environment.
5. The County will endeavor to attribute construction and maintenance costs associated with noise abatement measures needed for land development activities to the associated development(s) in whole or in part.

D. E. Heritage Resources

The rural character of the County is deeply associated with the County's rich history. Stone walls and tree-lined rural roads frame great expanses of farmland dotted with historic homes, barns, and small farm structures creating a unique Loudoun landscape. In addition to these scenic resources, there are six County-administered historic districts, two town-administered historic districts and one historic district on the Virginia Register of Historic Places. Loudoun has 49 historic sites listed on the National Register of Historic Places and five National Landmark sites. These sites are major tourist destinations. The impact that roads and other means of transportation have on the rural landscape must be considered during the design of road-improvement and new construction projects. These sites are closely tied to their rural settings and can be negatively affected by road projects.

One method used by the County to help facilitate the preservation of scenic roads and their associated landscapes is through state-designated "Virginia Byways", as authorized by the 1966 Scenic Highway and Virginia Byways Act. Virginia Byways are corridors with significant aesthetic and cultural value, leading to or lying within areas of historical, natural or recreational significance. Virginia Byways designation could ensure valued heritage resources are considered as part of road improvement and maintenance projects. The designation does not guarantee the conservation and protection of roadways or their adjacent corridors. Local land use controls are still needed to preserve the unique character of the Virginia Byway corridor. Thirteen Virginia Byways are located in the County. They are:

- Route 15 (James Monroe Highway) from Route 50 to Maryland;
- Route 662 (Clarkes Gap Road) from Waterford to Route 9 at Paeonian Springs;
- Route 665 (Loyalty Road) from Taylorstown to Waterford;
- Route 690 (Mountain Road) from Lovettsville to Hillsboro;
- Route 704 (Harmony Church Road) from Hamilton to Route 15;
- Route 719 (Woodgrove Road) from Round Hill to Hillsboro;
- Route 734 (Snickersville Turnpike) in its entirety;
- Route 673 (Milltown Road) from the intersection with Route 287 in Lovettsville to the intersection with Route 681;
- Route 681 (Milltown Road) from the intersection with Route 673 to the intersection with Route 698 in Waterford;
- Route 722 (Lincoln Road) from the southern boundary of Purcellville, including the JLMA to the intersection with Route 728;
- Route 728 (North Fork Road) from the intersection with Route 722 to the intersection with Route 731, and;
- Route 731 (Watermill Road) from the intersection with Route 728 to the intersection with Route 734.
- Old Route 7 (Colonial Highway) from Route 699 to Route 287 (approved February 2001).

The County will also seek Virginia Byway designation for John Mosby Highway (Route 50), Route 626, Edwards Ferry Road (Route 773), Harpers Ferry Road (Route 671), and Charles Town Pike (Route 9).

Section 6-1803 of the *Loudoun County 1993 Zoning Ordinance* provides an opportunity for the County to further protect historic roads through the designation of Historic Roadway Districts and Historic Access Corridor Districts. The County will pursue the creation of the Beaverdam Historic Roadway District. In addition, Routes 50 and 626 through the Mosby Heritage Area and Route 621 will also be considered for designation as Historic Roadway Districts.

See also Chapter Five of the *Revised General Plan* for additional policy direction on the County's heritage resources.

Heritage Resource Policies

1. The *Revised Countywide Transportation Plan* maintains and supports the policies contained in the General plan, as implemented by the Zoning Ordinance, to protect the cultural, historical and archeological resources, the agricultural and forestal districts, "Virginia Byways" and overall rural and community character features in the county.
2. In accordance with the Heritage Resources Policies in Chapter Five of the Revised General Plan, the County will implement measures to protect cultural, historic and archaeological sites which are affected by state-funded road improvement projects.
3. The creation of Historic Roadway Districts and Historic Access Corridors will be pursuant to Section 15.2-2201 and 15.2-2306 of the Code of Virginia, respectively. No property may be placed in any type of historic roadway district or historic access corridor without the written consent of a two-third majority of the property owners in the district.
4. The County will identify, define, and/or designate Virginia Byways, Historic Roadway Districts, and Historic Access Corridor Districts beneficial to preserving the rural and community character of the county.
5. To protect the historic character, the surrounding landscape, and the cultural importance as part of the "Old Carolina Road," the County will designate Evergreen Mills Road as an Historic Roadway District as provided for in the Zoning Ordinance with a specific historic roadway district area plan.
6. To protect and preserve the historic character of the historic roads in the southwestern part of the County, the County will designate the network of 32 historic roads, which will be known as the "Beaverdam Historic Roadways District," as a Historic Roadways District as provided for in the Zoning Ordinance. The Beaverdam Historic Roadways District is generally located south of Route 734 and north of Route 50 and is bounded to the east by Route 611 and to the west by the Blue Ridge Mountain slopes.
7. To protect the entrance corridor to the National Register Middleburg Historic District, as well as the scenic and historic character and importance of the first paved road in the Commonwealth, the County will designate Route 50 through the Mosby Heritage Area as an Historic Roadway District as provided for in the 1993 Zoning Ordinance. To further protect the entrances to the Middleburg Historic District, the County will designate Route 626 (Foxcroft Road and The Plains Road) as a Historic Roadway District as provided for in the 1993 Zoning Ordinance.
8. The County will pursue Virginia Byways designation by the Commonwealth for Charles town Pike (Route 9), Harper's Ferry Road (Route 773), Route 50 (through the Mosby Heritage Area), and Route 626 in its entirety.

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Glossary

Ordinary High Water Mark: The line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Resource Protection Area (RPA): Lands adjacent to water bodies with perennial flow that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts, which may result in significant degradation of the quality of state waters. In their natural condition, these lands provide for the removal, reduction, or assimilation of sediments, nutrients, and potentially harmful or toxic substances from runoff entering the Chesapeake Bay and its tributaries, and minimize the adverse effects of human activities on state waters and aquatic life. The RPA shall include:

- Wetlands connected by surface flow and contiguous to water bodies with perennial flow; and
- A 100-foot buffer area located adjacent to and landward of the wetlands and along both sides of any water body with perennial flow, measured horizontally from the Ordinary High Water Mark.